

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Parts 1, 21, 73, 74 and 101 of the)	WT Docket No. 03-66
Commission's Rules to Facilitate the Provision of Fixed)	RM-10586
and Mobile Broadband Access, Educational and Other)	
Advanced Services in the 2150-2162 and 2500-2690)	
MHz Bands)	
)	
Part 1 of the Commission's Rules - Further Competitive)	WT Docket No. 03-67
Bidding Procedures)	
)	
Amendment of Parts 21 and 74 to Enable Multipoint)	MM Docket No. 97-217
Distribution Service and the Instructional Television)	
Fixed Service to Engage in Fixed Two-Way)	
Transmissions)	
)	
Amendment of Parts 21 and 74 of the Commission's Rules)	WT Docket No. 02-68
With Regard to Licensing in the Multipoint Distribution)	RM-9718
Service and in the Instructional Television Fixed Service)	
for the Gulf of Mexico)	
)	

**COMMENTS OF CLEARWIRE CORPORATION
IN RESPONSE TO FURTHER NOTICE OF PROPOSED RULEMAKING**

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EXECUTIVE SUMMARY

In the *Report and Order* in the *Fixed and Mobile Broadband Access* proceeding, the Commission took critical steps in the evolution of service and technical rules for the Broadband Radio Service (“BRS”) and the Educational Broadband Service (“EBS”) that will promote the availability of competitive wireless broadband services throughout the country. Clearwire Corporation (“Clearwire”) supports the new regulatory framework adopted by the Commission. The new rules, including the de-interleaved bandplan, the additional spectrum allocated for BRS in the band, the geographic licensing scheme, the technical rules, the “splitting the football” approach for defining geographic service areas, and the plan for transitioning the spectrum to the new bandplan should ensure that this valuable spectrum will at long last be put to its highest and best use by incumbent operators and new competitors.

In this phase of the proceeding, Clearwire urges the Commission to adopt additional rules with respect to auctions, the transition to the new band plan, and substantial service demonstrations, that will encourage competition in wireless broadband, prevent stockpiling or warehousing of spectrum, create new opportunities for new entrants, and facilitate the speed of transition and deployment in the band.

In order to meet these goals, the Commission should immediately take stock of the BRS and EBS inventories, identify all vacant and defaulted spectrum, and quickly auction such spectrum. The Commission should establish short but reasonable performance deadlines that, if not met, will result in license cancellations and the availability of additional spectrum for auction. Available EBS and BRS spectrum should be auctioned on a Basic Trading Area (“BTA”) basis, but each available channel group should be auctioned separately. Operators no longer need “all available” spectrum in a BTA as wireless broadband services require fewer frequencies than former business plans in the band. In addition, Lower Band Segment (“LBS”) and Upper Band Segment (“UBS”) channel groups should be

auctioned separately from individual Middle Band Segment channels. LBS and UBS Channels will be deployed for commercial wireless broadband services and will, therefore, be more highly valued.

Clearwire urges the Commission to adopt Part 27 substantial service performance benchmarks for BRS and EBS licensees. The Commission should adopt procedural and substantive rules with regard to substantial service that will prevent spectrum warehousing and encourage expeditious transitions and deployments in the band. Specifically, Clearwire supports a requirement that substantial service demonstrations be made five years after the effective date of the new rules. The demonstrations should be required on each channel group and meaningful safe harbors should be established. No exceptions or credits should be offered for prior, discontinued service. Enforcing aggressive deployment policies, and auctioning spectrum that does not meet the performance standards, will ensure the assignment of spectrum to service providers most likely to utilize it to serve the public good.

Finally, the Commission should abandon its tentative conclusion to eliminate the so-called wireless cable exception that allows commercial interests (BTA authorization holders) to apply for EBS spectrum when a significant amount of such spectrum is vacant and available in the market. The Commission created this exclusive right for BTA authorization holders consistent with its goal in the 1996 BTA auction of “establishing filing procedures and policies that will encourage the accumulation of a full complement of channels necessary for a viable MDS system.”

The Commission’s multi-year effort to promote the availability of wireless broadband to all Americans, increase competition in wireless broadband, create new opportunities for competitors and promote the economic viability of services offered over EBS and BRS spectrum is finally producing results. The Commission is very close to realizing its objectives in this proceeding, and it should make every effort to expedite implementation of the new regulatory regime for EBS and BRS.

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**COMMENTS OF CLEARWIRE CORPORATION
IN RESPONSE TO FURTHER NOTICE OF PROPOSED RULEMAKING**

Clearwire Corporation ("Clearwire"), through counsel and pursuant to Section 1.415 of the Commission's rules, files comments in response to the Further Notice of Proposed Rulemaking contained in the *Report and Order and Further Notice of Proposed Rulemaking*¹ in which the Commission advances its agenda to reform the rules that govern the Broadband Radio

¹ *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 14165 (2004) ("*Further Notice*" or "*Report and Order*").

Service (“BRS”) and the Educational Broadband Service (“EBS”). Clearwire previously participated in this proceeding through its subsidiary, Fixed Wireless Holdings, LLC.

In this phase of the proceeding, the Commission has an opportunity to take additional, important steps to ensure that committed licensees and operators, like Clearwire, can offer wireless broadband services over EBS and BRS spectrum in the near term.² Clearwire urges the Commission to adopt additional rules with respect to auctions, the planned transition, and substantial service demonstrations that will encourage competition in wireless broadband, prevent stockpiling or warehousing of spectrum, create new opportunities for new entrants, facilitate the speed of transition and deployment in the band, and facilitate the highest and best use of the spectrum.³

I. INTRODUCTION.

Clearwire was founded by Craig McCaw in 2003 to provide competitive broadband wireless services to residential and small business customers throughout the United States and around the world. To date, Clearwire has raised over \$200 million to fund its wireless broadband strategy and has acquired the use of spectrum in over 70 U.S. markets.

Through its operating subsidiaries, Clearwire already is using BRS and EBS spectrum to provide high-speed wireless Internet access service to customers in Jacksonville, Florida; St. Cloud, Minnesota; and Abilene, Texas. Clearwire’s service uses a state-of-the-art wireless

² Clearwire has been working closely with the Wireless Communications Association International (“WCAI”) and other industry participants in this rulemaking. Clearwire supports the comments of the WCAI with respect to the following issues and will therefore not address them in these comments: (1) lifting restrictions on grandfathered E and F-groups; (2) allowing self-transitions after the three-year transition period; (3) eliminating the requirement that all EBS channels must come from the same channel group; and (4) distributing regulatory costs among BRS licensees in a fair and equitable manner.

³ *Report and Order*, 19 FCC Rcd at 14169 ¶ 5.

modem that can be plugged into a desktop computer, a laptop, or a local network. The modem can be set up anywhere in a customer's home or office – upstairs or downstairs, inside or outside. The Clearwire connection is always-on, always-secure.

Clearwire plans to offer a complete, self-installed bundle of high speed Internet access, and local and long distance broadband (VOIP) voice services at affordable prices to residential and small business customers in the United States and in countries throughout the world.

Broadband voice services will be bundled with Clearwire's product set within the next 10 to 12 months. Clearwire's broadband wireless technology will compete directly with cable and DSL providers.

Clearwire is uniquely-situated to compete in the wireless broadband market segment due to two key strategic relationships. Through its acquisition of NextNet, Clearwire deploys its service using its own proprietary hardware. NextNet develops, manufactures and sells the industry's first non-line-of-sight ("NLOS") plug-and-play platform for delivery of broadband fixed wireless services with a base station that weighs just 16 kg, and mounts easily to a pole, tower, building rooftop or standard indoor rack. Deploying its system through its own wholly-owned subsidiary enables Clearwire to more effectively respond to and meet customer needs as they evolve and change with market demands. The OFDM-based platform consists of fully-integrated indoor, plug-and-play (self-installable) subscriber units, as well as outdoor NLOS subscriber units, a fully-integrated base station transceiver and a comprehensive network management system.

In 2004 Clearwire also entered into a strategic relationship with Intel that made a significant investment in Clearwire as part of Intel's commitment to spend \$150 million in funding broadband wireless companies and supporting development of Wi-Max-based networks.

Clearwire and Intel are collaborating on developing and deploying broadband services using Wi-Max technology.

Clearwire tailors its service offerings to appeal to its target market of residential and small business customers. Clearwire's initial objectives are to: (1) offer Internet access download speeds of up to 1.5 Mbps; (2) provide customers with easy to install wireless broadband equipment that permits in-home networking through Homeplug 1.0; (3) deploy services rapidly to urban and rural markets where fewer service alternatives exist; and (4) establish strategic partnerships and alliances to expand marketing reach and retail and wholesale distribution channels.

II. THE COMMISSION SHOULD CONDUCT STAGED SPECTRUM AUCTIONS TO FACILITATE EXPEDITIOUS ASSIGNMENT OF LICENSES AND RAPID DEPLOYMENT OF BROADBAND SERVICES.

As the *Further Notice* makes clear, preventing the stockpiling and warehousing of spectrum, promoting rapid development of new technologies and services, and facilitating the highest valued use of radio licenses are key Commission objectives in this proceeding.⁴ In order to meet these goals, the Commission should immediately take stock of the BRS and EBS inventories, identify all vacant and defunct spectrum, quickly auction spectrum that is available at this time, and establish short but reasonable performance deadlines that, if not met, will result in license cancellations and the availability of additional spectrum for auction.

A. The Commission Should Immediately Auction Vacant EBS Spectrum And Defaulted BRS Basic Trading Area Authorizations.

The Commission asked in the *Further Notice* about the timing for auctioning unassigned spectrum and whether parties other than incumbents are interested in acquiring unassigned

⁴ *Further Notice*, 19 FCC Rcd at 14282-85 ¶¶ 321-24.

spectrum.⁵ New wireless broadband entrants that seek to build a nationwide footprint, like Clearwire, need immediate access to available spectrum, both assigned and unassigned, in order to widely deploy services and successfully compete with cable, DSL and other wireless broadband competitors.

The Commission can achieve its objective of creating new opportunities for new entrants, particularly those that are spectrum constrained, by immediately auctioning all currently available spectrum.⁶ Clearwire urges the Commission to expeditiously identify all fallow EBS and BRS spectrum and, as soon as is reasonably practicable, auction all such spectrum including defaulted Basic Trading Area (“BTA”) authorizations and vacant or defaulted EBS spectrum.⁷ As further discussed below, BTA authorizations should be auctioned on a channel group basis.

⁵ *Further Notice*, 19 FCC Rcd at 14266-67 ¶¶ 267-272.

⁶ *Report and Order*, 19 FCC Rcd at 14169 ¶ 5 (emphasizing the Commission’s objective of encouraging competition by creating new opportunities for new entrants).

⁷ The Commission has a statutory mandate to promote competitive, efficient and intensive use of wireless spectrum and the “development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays.” 47 U.S.C. § 309(j)(3)(A)-(D). This mandate must include making available, through auction, all vacant wireless spectrum so that it can be used to serve the public. *See Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, Second Report and Order, 9 FCC Rcd 2348, 2358 ¶¶ 57-58 (1994) (concluding that the Commission’s auction procedures promote the objectives of Section 309(j)(3)). The Commission has recognized the benefits of licensing spectrum in order to ensure that the spectrum does not lay fallow. For example, the Commission recently redesignated spectrum in the 1910-1915 MHz band for licensed fixed and mobile services to “promote the rapid and widespread introduction of services into spectrum that heretofore has lain fallow.” *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, 19 FCC Rcd 14969, 15088 ¶ 228 (2004).

1. A BRS/EBS Audit And Cancellation Of Defunct Licenses Will Help Expedite Broadband Services To Customers.

The BLS corrections project that was undertaken by the Wireless Telecommunications Bureau in 2002 should allow the Commission to quickly identify all vacant and defaulted EBS and BRS spectrum that can be auctioned in the near term. All defaulted BTA authorizations and all defaulted EBS and BRS licenses should be cancelled. This exercise will benefit new entrants and the public interest by creating new opportunities for spectrum, it will benefit current BTA authorization holders by identifying the commercial spectrum that is available for deployment, and it will assist potential auction bidders in assessing the availability and value of auctioned spectrum. Commission staff also can easily identify the viable licenses which, in coming years, will be required to transition to the new band plan and demonstrate substantial service.⁸

⁸ BTA authorization holders, and EBS and BRS incumbents, who did not construct facilities or satisfy BTA build out requirements in response to the Commission's suspension of the construction and buildout requirements, should be afforded the full three-year transition period to file initiation plans and begin wireless broadband deployments under the new regulatory regime. New entrants like Clearwire, which recently acquired BTA rights, should be afforded an opportunity to deploy services under the new rules. The Commission agreed that it would suspend the August 16, 2003 build out deadlines because it would "allow the Commission to evaluate the performance requirements and service rules for this band." *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 18 FCC Rcd 6722, 6805 ¶ 200 (2003). The Commission has adopted service rules for the band, but continues to evaluate performance requirements. Licensees that have otherwise complied with the Commission's requirements should be afforded an opportunity to satisfy the new performance requirements and service rules.

2. A Near Term Auction Will Not Adversely Affect The BRS/EBS Transition.

Auctioning vacant spectrum in the near term need not delay the start of the three-year transition period.⁹ Rather, the auction will assist the transition and rapidly open more locations to the deployment of more robust services. Any newly auctioned spectrum can be readily incorporated into transition plans once the spectrum becomes available. Because vacant spectrum, by definition, is not in use, there will be no operational systems to “transition.”

3. Before Auctioning Vacant EBS Spectrum, The Commission Should Eliminate The Four-Channel Limitation.

The Commission asked in the *Further Notice* whether the four-channel limitation for EBS licensees remains necessary.¹⁰ The Commission should eliminate this rule prior to the first auction of vacant EBS spectrum. As the WCAI pointed out in the “White Paper,” the “[f]our [c]hannel [r]ule’ has outlived its usefulness.”¹¹ Clearwire agrees that the expectations of existing EBS licensees to expand their frequency holdings and their geographic service areas through future BTA auctions would be frustrated by continued application of the four-channel limitation and/or would prompt the filing of numerous EBS waiver requests.¹² The rule should, therefore, be eliminated.

⁹ *Further Notice*, 19 FCC Rcd at 14267 ¶ 272 (inquiring whether assigning licenses prior to implementation of the transition may interfere with the new band plan).

¹⁰ *Id.* at 14291-92 ¶¶ 344-46.

¹¹ *Proposal for Revising the MDS and ITFS Regulatory Regime*, Wireless Communications Ass’n Int’l, Inc., Nat’l ITFS Ass’n, Catholic Television Network, WT Docket 03-66 at 55 (filed Oct. 7, 2002) (“*White Paper*”).

¹² *Id.* at 56.

B. The Commission Should Conduct A Second Auction At The End Of The Three-Year Transition Period And A Self-Transition Period.

At the conclusion of the three-year transition period, the Commission should afford licensees whose spectrum is not subject to an initiation plan, or that have not been granted an opt-out or waiver of the obligation to transition, a period of time during which the licensee can “self-transition.” This proposal is discussed in more detail in the WCAI petition for partial reconsideration.

Following the self-transition period, the Commission should again audit EBS and BRS licenses to identify those licenses that: (1) are not part of a transition plan; (2) have not been granted an opt-out or waiver; and/or (3) have not self-transitioned. As the Commission suggests in the *Further Notice*,¹³ these licensees should be afforded bidding credits in exchange for their spectrum, and the spectrum should be immediately auctioned. It is important that bidding credits accurately reflect the value of the surrendered spectrum, and bidding credits should be freely assignable. In order to prevent warehousing of spectrum, encourage opportunities for new entrants, and promote rapid deployment of wireless broadband services, the Commission should make any and all fallow spectrum available in a timely fashion at specified intervals to companies and educators that will put it to its highest and best use.¹⁴

When the Commission evaluates whether BRS spectrum issued on a BTA basis is included in an initiation plan, such evaluations should be made on the basis of each channel

¹³ *Further Notice*, 19 FCC Rcd at 14276-80 ¶¶ 303-12.

¹⁴ Clearwire suggests three auctions in these comments. The first should take place immediately. A second auction should take place after the three-year transition and a self-transition period. A third auction should take place after required substantial service demonstrations which, Clearwire suggests, should take place on the five-year anniversary of the effective date on the rules.

group that is subject to the BTA authorization. This approach will encourage the full use of all spectrum. If any spectrum in a BTA is not used, it should be returned to the Commission and auctioned to the bidder that will put the spectrum to its highest and best use.

C. Any Licenses For Which Substantial Service Cannot Be Demonstrated Five Years After The Effective Date Of The Rules Should Be Auctioned.

The unique characteristics of EBS and BRS spectrum (*e.g.*, incumbent operations in the band, staggered license terms and the impending transition) support the establishment of a date certain for the initial substantial service showing for all EBS and BRS licensees that, unlike many other wireless services, is not coupled with license renewals. Clearwire proposes in Section III below that EBS and BRS licensees should be required to demonstrate substantial service for the first time on the five-year anniversary of the effective date of the new rules.

If substantial service cannot be demonstrated for any EBS or BRS licenses (or in the case of BTA authorizations, any channel groups) on the five-year anniversary of the effective date of the rules, the Commission should diligently cancel the licenses, issue the licensees appropriate bidding credits for their spectrum, and timely auction the spectrum to a new entrant that will deploy broadband services.¹⁵

¹⁵ When the Commission undertakes the substantial service evaluation after five years, BRS incumbent licensees (as opposed to BTA authorization holders) should only be afforded bidding credits for their spectrum if they actually deployed wireless broadband service in the GSA, but failed to meet the substantial service standard. If a BRS incumbent's spectrum is part of a transition plan, but the incumbent fails to build any wireless broadband systems on its spectrum, then the bidding credits associated with such spectrum should revert to the relevant BTA authorization holder.

D. The Commission Should Auction EBS And BRS Spectrum On A BTA Basis, And LBS And UBS Channel Groups Should Be Auctioned Separately From Individual MBS Channels.

1. The Commission Should Use BTAs As The Geographic Service Area For Future Auctions.

Given the already-complicated regulatory environment for BRS and EBS spectrum, the Commission should, whenever possible, use the same geographic service area designations as now exist for this spectrum.¹⁶ In 1996 when the Commission auctioned BRS spectrum, it licensed and auctioned the spectrum on the basis of BTAs.¹⁷ Clearwire urges the Commission to continue to use this geographic service area for future EBS and BRS spectrum auctions in order to avoid further regulatory complexity.

2. Spectrum Should Be Auctioned On The Basis Of Individual Channel Groups Rather Than Spectrum On A BTA-Wide Basis.

In its auction design the Commission should auction spectrum in the smallest increments possible in order to make EBS and BRS spectrum available to the greatest number of potential competitors. Spectrum should be assigned on a channel block / BTA basis similar to the method used to license spectrum in other services.¹⁸

¹⁶ Consistent with the petition for partial reconsideration filed by the WCAI, rural commenters and others in this proceeding, Clearwire agrees that the Commission should mandate transitions of EBS and BRS spectrum on a BTA basis, and not larger geographic areas.

¹⁷ *Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service*, Report and Order, 10 FCC Rcd 9589 (1995) ("*BTA Auction Order*")

¹⁸ Spectrum in all of the following services are auctioned on a channel block or frequency block basis: 220 MHz, 24 GHz, 39 GHz, 700 MHz, AMTS (automated maritime telecommunications system), LMDS (local multipoint distribution system), MAS (multiple address system), PCS (narrowband and broadband), Paging (at various frequencies), 800 MHz SMR, WCS (wireless communications services).

In the 1996 BTA auction for BRS spectrum, the Commission awarded to the winning bidder of each BTA “all available” BRS spectrum. All available or all remaining commercial spectrum in a BTA was needed by a single wireless cable operator in order to effectively compete with the local franchised cable operator.¹⁹ Although the aggregation of all spectrum in a market was required for wireless cable video subscription services, such aggregation is not a requirement for new uses of the spectrum. Wireless broadband business plans require substantially fewer channels in order to effectively deploy competitive wireless broadband service. Many operators plan to deploy systems with just eight to sixteen channels. Given the more limited spectrum requirements, two or even three wireless broadband companies could compete for subscribers in any given market and each will need spectrum. Thus, spectrum auctions on a channel group basis for each BTA will help promote competition.

3. MBS Channels May Not Be Valued As Highly As LBS And UBS Channels And Should Therefore Be Auctioned Separately.

In the *Further Notice* the Commission asked whether bidders would place different values on different frequencies in the same area.²⁰ Clearwire concludes that new entrants will value spectrum in the Lower Band Segment (“LBS”) and the Upper Band Segment (“UBS”), which can be used for low-power uses, more highly than spectrum in the Middle Band Segment (“MBS”). MBS spectrum is designated for high-power uses and likely will not be deployed for wireless broadband services, unless all licensees in the market agree that high power operations are unnecessary and all spectrum can be used for low-power, wireless broadband purposes. Given this uncertainty, it is likely that new entrants will not value MBS spectrum as highly as

¹⁹ *BTA Auction Order*, 10 FCC Rcd 9593-94, 9603-09.

²⁰ *Further Notice*, 19 FCC Rcd at 14269 ¶ 280.

spectrum in the LBS or UBS. In its auction design, the Commission should therefore auction LBS and UBS channel groups separately from individual MBS channels.

III. THE COMMISSION SHOULD ADOPT THE PART 27 SUBSTANTIAL SERVICE REQUIREMENT FOR BRS AND EBS.

The Commission should adopt procedural and substantive rules with regard to substantial service demonstrations that will help prevent spectrum warehousing and encourage expeditious transitions and deployments in the band.²¹ Clearwire supports substantial service demonstrations five years after the effective date of the rules, with required demonstrations on each channel group, meaningful safe harbors, and no credits or exceptions for prior, discontinued service. Enforcing aggressive deployment policies, and auctioning spectrum that does not meet the performance standards, will ensure the assignment of spectrum to companies most likely to utilize it to serve the public good.

Consistent with the approach Clearwire advocates for Commission evaluation of transition progress (*i.e.*, on a channel group basis), the Commission should evaluate substantial service demonstrations for each licensed channel group. For BTA authorizations, a separate substantial service demonstration should be required for each potential channel group that could be utilized under the authorization in order to ensure full spectrum use and service to the public.²²

²¹ *Id.* at 14282-85 ¶¶ 321-24.

²² For example, if a BTA authorization covers M1, M2, the E-group, F-group and H-group channels, and if a substantial service demonstration is made only for the E-group and the F-group, then the licensee shall be entitled to retain its authorization only for the E-group and F-group. The licensee would return its authorization to the Commission for channels M1, M2 and the H-group, and the Commission would issue appropriate credits for the spectrum. Those frequencies would then be auctioned to the highest bidder.

A. The Commission Should Tailor The Substantial Service Standard For EBS And BRS To Address The Unique Challenges Faced By Licensees.

In adapting a substantial service standard, the Commission should consider the unique challenges faced by EBS and BRS, including incumbent operations in the band, required service to the educational community, transition to a new band plan, and staggered license terms for different licenses that are part of the same wireless system.²³ These challenges all could impact development and deployment of wireless broadband services in the band.

A substantial service standard, rather than strict construction benchmarks, is preferable for measuring the progress of EBS and BRS licensees. The implementation of a single construction requirement for all EBS and BRS licensees, when each has significant flexibility to offer a wide range of wireless services (and can face the foregoing challenges in varying degrees in their markets), will not produce equitable results or encourage the widest possible deployment of broadband services. The Commission has concluded for other flexible use services, as it should for EBS and BRS, that a substantial service showing is reasonable when extensive coordination with other spectrum users is required²⁴ and incumbents are licensed in the bands.²⁵

²³ *Further Notice*, 19 FCC Rcd at 14383-84 ¶ 322.

²⁴ *See, e.g., Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, 17 FCC Rcd 9614, 9684-85 ¶ 177 (2002) (“*MVDDS Order*”) (explaining that MVDDS licensees are subject to various operating restrictions and must engage in extensive coordination efforts with the other spectrum users).

²⁵ *See Amendment of Part 90 of the Commission's Rules To Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, Third Report and Order; Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11016 ¶ 154-56, 11020-21 ¶ 163 (1997) (The existence of incumbents in the 220 MHz band may preclude economic area (“EA”) and regional licensees from providing service to populations inside the incumbent’s service area. “By providing the ‘substantial service’ option, we afford sufficient flexibility to enable EA and Regional licensees who are providing new, *e.g.*, fixed services – or are capable of only serving what are now unserved populations – to satisfy a construction requirement.”); *Service Rules for* (Footnote continues on next page.)

Given the obstacles EBS and BRS licensees will encounter in the transition, the flexibility afforded by a substantial service demonstration is critical to the timely delivery of broadband service. As the Commission has noted: “Compared to a construction standard, a substantial service requirement will provide licensees greater flexibility to determine how best to implement their business plans based on criteria demonstrating actual service to end users, rather than on a showing of whether a licensee passes a certain proportion of the relevant population.”²⁶

B. The Commission Should Adopt The Same Safe Harbors For Fixed And Mobile Services In The BRS And EBS.

The Commission generally has adopted different safe harbors for fixed and mobile wireless services that are deployed using flexible use spectrum. The safe harbor commonly

(Footnote continued from previous page.)

Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, Report and Order, 18 FCC Rcd 25162, 25192 ¶¶ 75-77 (2003) (Mandating specific benchmarks would be inequitable based upon the existence of incumbents. A substantial service requirement provides the Commission with the flexibility to consider the particular circumstances of each advanced wireless service licensee and how the level of incumbency has impacted the licensee’s ability to build-out and commence service in its licensed area.); *Amendment of Part 90 of the Commission’s Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, Second Report and Order, 12 FCC Rcd 19079, 19094 ¶ 34 (1997) (“[M]ore flexible construction requirements will allow EA licensees in the encumbered lower 230 channels to respond to market demands for service and thus eliminate the need for an EA licensee to meet construction requirements based on population alone.”); *Amendment of Part 90 of the Commission’s Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, Memorandum Opinion and Order and Order on Reconsideration, 14 FCC Rcd 17556, 17568 ¶ 16 (1999) (A substantial service standard “affords licensees the flexibility to develop and provide new services, rather than focusing their resources on meeting population coverage criteria and channel usage requirements.”); *Further Notice*, 19 FCC Rcd at 14284-85, ¶ 324 (citation omitted) (“A shift towards a substantial service standard will help encourage licensees to provide the best possible service and avoid ‘construction ...to meet regulatory requirements rather than market conditions.’”).

²⁶*Amendments to Parts 1, 2, 27 and 90 of the Commission’s Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*, Report and Order, 17 FCC Rcd 9980, 10010 ¶ 72 (2002) (“Gov’t Band Order”).

adopted for fixed services is the construction of four (4) permanent links per one million people.²⁷ For mobile services, the common safe harbor is the provision of coverage to twenty (20) percent of the population of the licensed service area.²⁸ Clearwire contends that both of these standards are too lenient and will not facilitate rapid transition and deployment in the band. In addition, there is no justification for different standards for fixed and mobile services offered over EBS and BRS spectrum.

As the Commission is aware, the former Part 21 build-out standard for BRS BTA authorization holders was met, and build-out certifications were filed, for many BTAs. The former build-out standard, found at Section 21.930 of the rules, provided that “within five years of the grant of a BTA authorization, the authorization holder must construct MDS stations to provide signals... that are capable of reaching at least two-thirds of the population of the applicable service area.”²⁹ If coverage to two-thirds of the population was achievable under the former regulatory regime, then it should be achievable under the new regulatory regime. A standard higher than the typical safe harbor for mobile services (*i.e.*, coverage to twenty percent of the population) is clearly achievable. Moreover, the common safe harbor for fixed wireless

²⁷ See, e.g., *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service* (“WCS”), 12 FCC Rcd 10785, 10844 ¶ 113 (1997) (“WCS Order”) (wireless communication service); *Rulemaking To Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band*, Second Report and Order, 12 FCC Rcd 12545, 12660-61 ¶¶ 21-25 (1997) (“LMDS Order”) (local multipoint distribution service); *MVDDS Order*, 17 FCC Rcd at 9684-85 ¶¶ 176-77 (multichannel video distribution and data service).

²⁸ See, e.g., *WCS Order*, 12 FCC Rcd at 10844 ¶ 113; *LMDS Order*, 12 FCC Rcd at 12660-61 ¶ 21-25; *Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service*, Report and Order, 15 FCC Rcd 1497, 1538 ¶ 70 (1999) (personal radio service).

²⁹ 47 C.F.R. § 21.930(c)(1).

services (*i.e.*, constructing four links or transmitters³⁰ per million), could result in even less coverage and actual service than a twenty percent coverage standard. Assuming an average throughput of 512 kbps, Clearwire estimates that each fixed, base transceiver station, with four sectors, could accommodate 2,400 users. Thus, a “four links (or transmitters) per million” standard would result in service to just 9,600 users per million people in a GSA, which is less than one percent of the population. This cannot be the extent of broadband deployment the Commission expects. For EBS and BRS performance benchmarks, the Commission should not rely on safe harbors that have been routinely adopted for other wireless services.

1. The Commission Should Adopt A Modified Version Of The Former BTA Build-Out Standard As The Safe Harbor For Substantial Service Demonstrations.

The Commission should incorporate a somewhat modified version of the former build-out requirements for BRS BTA authorizations as the new substantial service safe harbor for both fixed and mobile services offered over EBS and BRS spectrum in urban and rural areas. As discussed above, the former rule required construction of signals that are capable of reaching at least two-thirds of the population in the applicable service area.³¹ This standard is consistent with IPWireless’s safe harbor proposal (*i.e.*, building and operating a system that is capable of

³⁰ Similar to the safe harbor adopted for MVDDS, “four separate transmitting locations per million,” if the Commission adopts a “four links per million” standard for EBS and BRS it should use the term “fixed base transceiver station” rather than “links”. According to the Commission, “a MVDDS license will more likely be used to provide a wireless service as opposed to being used to provide backbone support for other networks by way of independent point-to-point links” as in other wireless services. *MVDDS Order*, 17 FCC Rcd at 9685 n.425. EBS and BRS licenses will also be used to provide wireless service rather than backbone support.

³¹ 47 C.F.R. § 21.930(c)(1).

serving two-thirds of the population in 60 months).³² It is also consistent with the safe harbor proposal of Grand Wireless for rural deployments (*i.e.*, covering 50 to 70 percent of a rural area population in four to six years).³³ Such a safe harbor will encourage the aggressive development of broadband services throughout a GSA in both urban and rural areas.³⁴

Clearwire, however, suggests modifying this standard slightly in order to specify that the signal must be of a quality that can provide reliable broadband service.³⁵ Otherwise, a licensee could meet its construction requirement simply by erecting a tower or installing equipment with a signal that may not be strong enough to provide “sound, favorable, and substantially above the level of mediocre” service to subscribers. This result is contrary to the Commission’s overarching goals of ensuring that competitive and innovative wireless services are available to all U.S. consumers.³⁶ The Commission should focus on criteria that demonstrate “*actual service*

³² *Further Notice*, 19 FCC Rcd at 14286-87 ¶¶ 327-28.

³³ *Id.* at 14287 ¶ 331.

³⁴ The Commission adopted similar safe harbor standards for 900 MHz and 800 MHz licensees. There, licensees must construct and operate a sufficient number of base stations to provide coverage to at least two-thirds of their service areas within five years of license grant. *See* 47 C.F.R. §§ 90.685(b); 90.665(c).

³⁵ The definition of substantial service – *i.e.*, “service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal” – includes on its face a qualitative component. *Id.* § 27.14(a). Under this definition, the Commission is required to determine whether a licensee provides quality, reliable wireless service, which necessarily entails some form of qualitative measurement. For example, the specific population and geographic coverage construction requirements that apply to some wireless services require licensees to base their coverage calculations on particular “signal field strengths that ensure reliable service for the technology utilized.” *Id.* § 24.103(e). A comparable qualitative showing of adequate service is required in the substantial service context, especially if a quantitative showing of signal field strength is not required.

³⁶ *Further Notice*, 19 FCC Rcd at 14282-85 ¶¶ 321-24; *see also* 47 U.S.C. § 309(j); *Renewal of Licenses to Provide Microwave Service in the 38.6-40.0 GHz Band*, 17 FCC Rcd 4404, 4404-07 ¶¶ 1-12 (WTB 2002).

to end users, rather than on a showing of whether a licensee passes a certain proportion of the relevant population.”³⁷ Thus, Clearwire proposes the following substantial service safe harbor:

“Within five years of the effective date of the *Report and Order*, each authorization holder must construct EBS or BRS stations on each channel group subject to the authorization that will provide signals that are capable of providing reliable broadband service to two-thirds of the population in the geographic service area.”³⁸

2. Prior Satisfaction Of Existing Benchmarks Should Be Counted For Substantial Service Only If Service Continues To The Next Measurement Period.

The Commission asked in the *Further Notice* whether licensees that have met existing benchmarks (*i.e.*, the build-out requirements of Section 21.930), should be deemed to have met the new substantial service standard.³⁹ In Clearwire’s view, if these licensees met the former build-out standards for their BRS BTA authorization with respect to each relevant channel group, have continued providing valuable service over the spectrum, and meet the substantial service standard at the appropriate measurement point (*i.e.*, five years after the effective date of the new rules), then the licensees should receive credit for prior deployments. Discontinued prior deployments, however, should not be counted as part of the substantial service demonstration at the relevant five-year measurement point. Such a result would condone warehousing and non-use of spectrum, which is contrary to the Commission’s objectives in this proceeding.

³⁷ *Gov’t Band Order*, 17 FCC Rcd at 10010 ¶ 72 (emphasis added).

³⁸ If the Commission is inclined to provide qualitative measures for what constitutes “reliable broadband service,” it could define it as wireless broadband service that provides, at a minimum, speeds of 512 kbps downstream and 64 kbps upstream, 99.99% of the time.

³⁹ *Further Notice*, 19 FCC Rcd at 14286-87 ¶ 328.

3. The Commission Should Consider Additional Factors In Its Substantial Service Analysis.

The Commission also should consider the following indicia of substantial service for EBS and BRS licensees which it considers for licensees in other flexible use and wireless services: (1) whether the licensee's operations serve niche markets, rural areas, discrete populations, remote areas and regions with special needs; (2) whether the licensee serves those with limited access to telecommunications services; (3) a demonstration that a significant portion of the population or land area of the licensed area is being served; and (4) whether the licensee offers specialized or technologically sophisticated premium service that does not require a high level of coverage to benefit customers.⁴⁰ The Commission should also review all substantial service showings that do not meet pre-determined safe harbors on a case-by-case basis, as it does for other wireless services, in order to evaluate the kinds of special circumstances that are described above.⁴¹

⁴⁰ See, e.g., *WCS Order*, 12 FCC Rcd at 10844 ¶ 113 (citations omitted) (“[T]he [FCC] may consider such factors as whether the licensee is offering a specialized or technologically sophisticated service that does not require a high level of coverage to be of benefit to customers, and whether the licensee's operations serve niche markets or focus on serving populations outside of areas served by other licensees.”); see also *LMDS Order*, 12 FCC Rcd at 12660-61 ¶¶ 21-24 (same); *Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS*, 15 FCC Rcd 10456, 10470-71 ¶¶ 27-28 (2000) (“*Narrowband PCS Order*”) (same); *Chasetel Licensee Corp.*, 17 FCC Rcd 9351, 9354-55 ¶¶ 8-11 (2002) (A substantial service showing may include the provision of residential, cutting-edge niche services to “campus” populations (business and educational) that are sparsely populated after normal school or work hours.); 47 C.F.R. § 101.1413(b) (Three factors to be considered in acting upon a substantial service showing are: (1) whether the licensee's operations serve niche markets, rural areas, or those outside the service areas of other licensees; (2) whether the licensee serves those with limited access to telecommunications services; and (3) a demonstration that a significant portion of the population or land area of the licensed area is being served.).

⁴¹ Other wireless services in which the Commission utilizes a case-by-case analysis of substantial service showings include WCS, AWS, LMDS, 220 MHz, MVDDS, PRS, 24 GHz, 39 GHz, PCS, SMR and paging services.

C. In Consideration Of The Unique Characteristics Of EBS And BRS, The Commission Should Not Tie Substantial Service Demonstrations To License Renewals.

Part 27 of the rules, which will govern EBS and BRS, requires a showing of substantial service in the license area within the prescribed license term.⁴² A licensee that fails to meet this construction requirement will forfeit its license and will be ineligible to regain it. This standard should not be applied to EBS and BRS licensees' license renewal applications filed during the five-year period following the effective date of the new rules. These licensees face unique challenges including the impending three-year transition to a new band plan, incumbent operations in the band and staggered license terms for various licensees in the same market and likely will not be in a position to demonstrate substantial service as part of their license renewal application. The *Report and Order* is clear that transition to the new bandplan cannot be achieved "if BRS and EBS licensees have to focus their resources on preserving legacy services solely because renewal approaches and licensees fear losing their authorizations...."⁴³ The *Report and Order* also acknowledges that licensees may go dark and "discontinue service during the actual transition."⁴⁴

Thus, the Commission should not impose a substantial service demonstration in connection with license renewal for licensees whose renewals arise during the next five years. Most BTA authorizations will expire in 2006 and will require renewal before the transition is complete. Many licensees did not construct under the old regulatory regime because the Commission suspended construction deadlines. Accordingly, for EBS and BRS licensees, the

⁴² 47 C.F.R. § 27.14(a).

⁴³ *Report and Order*, 19 FCC Rcd at 14254 ¶ 233.

⁴⁴ *Id.*

Commission should not examine whether the substantial service demonstration has been satisfied until the five-year anniversary of the effective date of the rules.

IV. THE COMMISSION MUST NOT COMPROMISE THE RIGHTS OF BTA AUTHORIZATION HOLDERS BY ELIMINATING THE RULE THAT ALLOWS BTA AUTHORIZATION HOLDERS TO COMMERCIALY LICENSE VACANT ITFS SPECTRUM.

The Commission should reject its tentative conclusion to eliminate the so-called “wireless cable exception” that allows commercial interests to apply for EBS spectrum when a significant amount of such spectrum is vacant and available in the market.⁴⁵ The Commission’s rationale for eliminating the rule, that “the changes we have made to our rules, especially the inclusion of BRS and EBS in our secondary market rules, provides commercial operators with sufficient access to BRS spectrum,”⁴⁶ is flawed.

As an initial matter, most spectrum that has been assigned by the Commission is either licensed or leased, and new entrants like Clearwire are in dire need of spectrum in all parts of the country in order to deploy their planned broadband services. Thus, notwithstanding the rule changes, new entrants particularly do not have nearly enough spectrum to deploy wireless broadband services.

Through considerable, ongoing effort, Clearwire has acquired spectrum rights in recent months, including certain BTA authorizations. To the extent any commercial EBS opportunities exist in these BTAs, the *BTA Auction Order* grants Clearwire, as the BTA authorization holder,

⁴⁵ *Further Notice*, 19 FCC Rcd at 14292-93 ¶¶ 347-50. The former rule was codified in Sections 74.990-992 of the Commission’s rules, 47 C.F.R. §§ 74.990-74.992 and the new rule is contained in Part 27 at Section 27.1201(c), 47 C.F.R. § 27.1201(c).

⁴⁶ *Further Notice*, 19 FCC Rcd at 14293 ¶ 349.

the exclusive right to apply for such frequencies.⁴⁷ The Commission created this exclusive right consistent with its goal of “establishing filing procedures and policies that will encourage the accumulation of a full complement of channels necessary for a viable MDS system.”⁴⁸ This valuable right, held and purchased by BTA authorization holders, must be retained. Clearwire cannot determine whether commercial ITFS opportunities exist in its BTAs until the Commission evaluates its inventory and publicly announces the vacant EBS spectrum. The Commission should expeditiously undertake a survey of unassigned and defaulted EBS spectrum and notify the public.

FCC licenses confer valuable rights that are more than a mere privilege and induce licensees like Clearwire to make substantial capital investments. The D.C. Circuit Court has found that the “granting of a license by the Commission creates a *highly valuable property right*, which, while limited in character, nevertheless provides the basis upon which large investments of capital are made and large commercial enterprises are conducted.”⁴⁹ The court also has noted that “[w]hile a station license does not under the Act confer an unlimited or indefeasible property right...nevertheless the right under a license for a definite term to conduct a broadcasting business requiring...substantial investment is *more than a mere privilege or gratuity*.”⁵⁰ As the Commission implements new rules that encourage new entrants and encourage deployment in

⁴⁷ *BTA Auction Order*, 10 FCC Rcd 9612 ¶¶ 41-42.

⁴⁸ *Id.* at 9612 ¶ 41.

⁴⁹ *Yankee Network, Inc. v. FCC*, 107 F.2d 212, 217 (D.C. Cir. 1939) (emphasis added).

⁵⁰ *L.B. Wilson, Inc. v. FCC*, 170 F.2d 793, 798 (D.C. Cir. 1948) (emphasis added) (citation omitted).

the 2.5 GHz band, it must not compromise these valuable license rights for BRS BTA licensees which were granted years ago.

V. CONCLUSION.

If the transition to the new band plan and the new regulatory regime is to be a success, the Commission must resist any efforts to slow progress in transitioning and utilizing this spectrum. The Commission must diligently make available through auction any spectrum that is not actively used to serve the public interest, and it must adopt and enforce substantial service performance requirements that will ensure the rapid deployment of wireless broadband services to all Americans.

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January 10, 2004

CERTIFICATE OF SERVICE

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